

Small Footprint Water Accesses



Design ideas for water trail accesses:

Case studies on volunteer-led work
by the Skunk River Paddlers.



Executive Summary

The intent of the Iowa Water Trails program is to increase recreation on Iowa's waterways to improve quality of life and creating a greater constituency for water quality in Iowa. However, as accesses become more prevalent, the risk of creating more impervious surfaces potentially could exacerbate water quality problems. Also, as many waterways are surrounded by some of Iowa's final bastions of wild places, small-footprint accesses are appropriate for the character of many riverways. While this publication does not argue against the need for larger facilities on certain waterways, this information is provided in the hope that on small- to mid-sized rivers, appropriate accesses are constructed.

Another consideration is site selection, which can greatly affect the longevity of an access on dynamic river systems. The tendencies toward incision on the outside edges of banks, as well as accretion and silt deposition on the inside edges of banks, can determine whether an access will be swept away or covered in several feet of muck during the next flood event.

The examples in this publication are possible because of the excellent photo documentation by Rick Dietz of the Skunk River Paddlers, a volunteer group that has put much sweat equity into the Skunk River Water Trail in Story County. The Skunk River presents numerous relevant examples for other water trails groups, such as a portage around a dam, a new access at a new bridge construction, and eventually will include a modification of a low-head dam to a rapids in Story City.

The topic of appropriately sized and sited accesses for Iowa rivers warrants further study, and information on the web pages at www.iowadnr.com/watertrails will be updated periodically as new information is gathered.



Geoweb is a rigid textile that can cover an excavated surface and filled with materials that allow water to pass through, such as gravel, sand, or soil, depending on the type. The geoweb holds loose materials together, and allows roots from nearby vegetation to help secure the mass. The Skunk River Paddlers used a 6"-deep geoweb at the Askew Bridge Access, and filled it with crushed limestone.

Railroad ties were anchored with galvanized steel u-channel signpost material to finish off the stairs.



Geoweb is available from the following sources:

<http://www.geocheminc.com/geoweb1.htm>

<http://www.big-o.com/geo/geoweb.htm>

http://www.acfenvironmental.com/geo_stablization.htm





Expect accesses to be submerged several times each paddling season. In this case, the finished Askew Bridge access doubled as a drainage ditch after a rain, and when fast water poured over the railroad ties, crushed limestone was scoured from some of the geoweb. More limestone was added for a ramp effect, which seems to have solved the pour-over problem.





At the Anderson's canoe access, a notoriously muddy and steep slide to the river was replaced with stairs that incorporated geoweb, limestone, and recycled plastic timbers, which last longer than railroad ties and are not soaked in creasote. Such timbers are manufactured by Iowa company Hammer Plastic, found online at <http://www.hammersplastic.com/products/landscape/bands/index.htm>.





Sometimes, a different construction project is already disturbing earth along a river. In this case, at 265th St., a contractor armouring the bank at a new bridge with limestone riprap was persuaded to create a gentle-sloped path of crushed limestone to the river.

On higher ground, trails can be covered with woodchips to minimize soil erosion and keep trails from getting muddy. It's worth pointing out that woodchips float away from areas that are frequently under water.





After the Skunk River Water Trail construction was underway, a canoeist drowned at the U.S. Filter Dam. It was realized that plans for an improved portage trail around the dam were more urgently needed, along with good signs at the dam.





At the E18 Access, the Skunk River Paddlers opted to use telephone poles as erosion stops, anchored with 7/8" reinforcing bar pounded with a sledge hammer 4' deep.



Clean-ups are a great way to generate enthusiasm for a water trail.



At Story City Park, a rock riffle lies below a low-head dam made of sheet pile. The dam face will have rocks stacked directly beneath it to break up the hydraulics and make the structure safer.

